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Interview:

Operations and monitoring fuel efficiency

and

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owner. He is based out of Wellington,
Ontario from Belleville, but his driving
is a long way from there. He has worked
for the company for the past seven years, making
trips between Toronto and Texas. His average
truck weighs in at about 11,000 kg
(24,000 lb). Fred likes driving down to the
south because the predominantly flat
terrain is good for his fuel efficiency.

Operations

When Fred owned was a 1985 cab-over-
engine, he purchased a new one, this time opting
for a commercial vehicle with a 425-horsepower
turbo diesel transmission and a 3.70 rear
axle ratio. He uses it to pull tandem axle
trailers. He has already logged more than
1.1 million miles on the truck,
and plans to trade it in any time soon.
It's running well, with a fuel efficiency of
10 km (8 mpg).

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trips between Ontario and Texas. His average
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(24,000 lb). Fred likes driving down to the
Gulf Coast because the predominantly flat
terrain suits him for his fuel efficiency.

Questions

When Fred owned was a 1985 cab-over-
engine, he purchased a new one, this time opting
for a conventional vehicle with a 425-horsepower
turbo diesel transmission and a 3.70 rear
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Fred Pheiffer:

*Specifications and monitoring
improve fuel efficiency*

Background

Fred Pheiffer has been trucking for 25 years, 15 as an owner-operator. He is based out of Wellington, Ontario, not far from Belleville, but his driving takes him a long way from there. He has worked for the same client for the past seven years, making runs between Toronto and Texas. His average payload per trip weighs in at about 11,000 kg (25,000 pounds). Fred likes driving down to the Lone Star State because the predominantly flat terrain is good for his fuel efficiency.

Specifications

The first truck that Fred owned was a 1985 cab-over. In 1992 he purchased a new one, this time opting for a conventional vehicle with a 425-horsepower engine, an 18-speed transmission and a 3.70 rear axle ratio. He always uses it to pull tandem axle semi-trailers. He has already logged more than 1.7 million km (1.1 million miles) on the truck, and he has no plans to trade it in any time soon. It is still performing well, with a fuel efficiency of 35.3 litres per 100 km (8 mpg).



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Canada

Fuel monitoring and efficiency

To maximize fuel efficiency, Fred relies heavily on two instruments – the turbo booster and the pyrometer – that allow him to keep a close watch on his engine. The booster controls the engine's level of air intake. "The turbo boost is a technology that's already more than 20 years old," says Fred. "It has a proven track record."

Installed in the manifold, the pyrometer is a sensor that measures the heat in the stack and helps prevent the engine from lugging. Although Fred had to shell out an extra \$100 for the pyrometer, he considers it a worthwhile investment. "I always felt that these two technologies helped me on my other truck," he explains, "so when I had my new truck spec'd I specifically insisted on having the pyrometer installed."

Fred believes that these two instruments make it much easier for truck drivers to locate an engine's "sweet spot" – the ideal combination of torque and horsepower. Fred finds that his truck's optimal range is between 10 and 15 on the turbo booster scale (30 is the highest possible reading) and 6 or less on the pyrometer gauge (18 is the maximum).

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Fred's fuel efficiency for 1999

Tractor	Engine	Torque	Transmission	Rear axle	Season	Payload	Fuel efficiency
1992	425 HP	1,350 foot-pounds	18-speed	3.70	Summer	11,340 kg (25,000 lb.)	37.61 L/100 km (7.5 mpg)
1992	425 HP	1,350 foot-pounds	18-speed	3.70	Winter	11,340 kg (25,000 lb.)	38.97 L/100 km (7.1 mpg)

Fred keeps track of how his truck is performing at all times by using a logbook. After every fill-up, he enters his odometer reading and the litres purchased.

For Fred, good fuel efficiency boils down to knowing how to get the best performance out of his vehicle. With the pyrometer, the turbo booster and his logbook, he is always aware of how his engine is running. Combining that knowledge with good control of speed and progressive shifting allows him to get the most bang for his buck whenever he fuels up.

“It takes time to understand how you can reach the best performance with a truck,” says Fred. “You need to pay close attention to detail. New technologies can probably help, but sometimes older technologies can do the trick - and at a much cheaper price.”



Learn more

For more information on energy-saving opportunities for fleets, please write to the following:

FleetSmart
Natural Resources Canada
Office of Energy Efficiency
580 Booth Street, 18th Floor
Ottawa ON K1A 0E4

You can also fax your request to (613) 952-8169 or
e-mail fleet.smart@nrcan.gc.ca.

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Office of Energy Efficiency
Office de l'efficacité énergétique

Leading Canadians to Energy Efficiency at Home, at Work and on the Road


The Office of Energy Efficiency of Natural Resources Canada is a dynamic organization with a mandate to renew, strengthen and expand Canada's commitment to energy efficiency in order to help address the challenges of climate change.



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